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REMARKS

In the latest Office Action, the Examiner indicated that claim 43 was objected to for being of improper form. Applicant has now amended claim 43 so that it properly depends from claim 41.

Claims 31-35, 37, 41-45 and 48-49 are rejected under 35 U.S.C. 102(b) as being anticipated by Chung et al., U.S. Patent No. 5,094,981. The Examiner maintains that the composite structure of Chung et al. includes layers 38, 34, 36, and 40. However, applicant wishes to point out that the composite structure of Chung et al. includes only layers 34 (titanium contact layer), 36 (titanium-tungsten or tungsten barrier layer) and 40 (interconnect layer comprising aluminum or aluminum alloy). See the last sentence of the abstract and col. 5, lines 64-66. Metal silicide layer 38 does not form part of the composite structure of Chung.

Accordingly, Chung et al. does not teach a first metal silicide, a second metal silicide, and an intermetallic compound which comprises a metal from the first metal silicide and a metal from a second metal silicide as claimed.

While the Examiner asserts that layer 36 comprises a metal from a first metal silicide and a second metal silicide when layer 40 comprises tungsten silicide "as an alternative embodiment," applicant wishes to point out that in order to anticipate applicants' claims, one skilled in the art would have to choose tungsten silicide from Chung's disclosed alternatives. The need for picking and choosing among several possible choices negates anticipation. See *In re Arkley*, 172 USPQ 524 (CCPA 1972). Further, even if one were to substitute tungsten silicide in layer 40, layer 36 would still not comprise a metal from a first metal silicide and a second metal silicide as claimed because layer 34 is not a metal silicide, but rather is comprised only of titanium. See col. 4, line 40.

Accordingly, Chung et al. do not anticipate the claims as they do not teach a composite interconnect structure including a first metal silicide, a second metal silicide, and an intermetallic compound which comprises a metal from each of the first and

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second metal silicides.

Nor do Chung et al. teach or suggest an intermetallic compound which is formed by a reaction between a first metal silicide and a second metal silicide as recited in claim 41. The composite interconnect structure of Chung et al. is formed by plasma etching the primary interconnect layer (aluminum) along with layers 36 (TiW) and 34 (Ti). The Examiner maintains that the "formed by" language of claim 41 has not been given patentable weight, since "the method of forming the device is not germane to the issue of patentability of the device itself and since Chung et al. discloses the same structure." However, as pointed out above, Chung et al. clearly does not disclose the claimed composite structure. Therefore, the formation of the intermetallic compound is certainly germane to the issue of patentability, especially when Chung et al. do not teach or suggest forming an intermetallic compound by a reaction between the first and the second metal silicide as claimed. The Examiner cannot choose to ignore claim language which clearly distinguishes over the prior art. See *In re Luck*, 177 USPQ 523 (CCPA 1973).

Claims 36, 38-40, and 46-47 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Chung et al. in view of Okamoto (U.S. 4,910,578). The Examiner maintains that Okamoto teaches an interconnect structure including a first metal silicide 4, a second metal silicide 8, and an intermetallic compound 10 comprising a metal from the first metal silicide and second metal silicide. As Applicant pointed out to the Examiner in the previous response, the titanium nitride film 10 of Okamoto is a **separate** barrier film which is not formed from metal silicides 4 and 8, but is deposited separately. See col. 4, lines 27-29. Nor is film 10 part of a composite interconnect structure as claimed.

Accordingly, neither Chung et al. nor Okamoto teaches the claimed interconnect structure as they do not teach an intermetallic compound in their composite structure which comprises a metal from each of a first metal silicide and a second metal silicide.

As neither Chung et al. nor Okamoto teach the claimed interconnect structure,

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there is no motivation to combine their teachings. Even if the teachings of the references were combined, the claimed composite interconnect structure would not result.

For all of the above reasons, applicant submits that claims 31-49 are patentable over the cited art of record. Early notification of allowable subject matter is respectfully solicited.

Respectfully submitted,

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